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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,872	03/08/2006	Stig-Ake Brolund	024445-590	1750

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BUCHANAN, INGERSOLL & ROONEY PC  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER
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KRECK, JOHN J

ART UNIT	PAPER NUMBER
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3673

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/540,872	Applicant(s) BROLUND, STIG-AKE	
	Examiner John Kreck	Art Unit 3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 8-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____   | 6) <input type="checkbox"/> Other: ____                           |

### DETAILED ACTION

The preliminary amendment has been entered.

Claims 8-20 are pending.

#### *Response to Amendment*

1. The amendment filed 6/27/05 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: claim 9 requires the pin to extend "outwardly past an inner diameter of the cover" It is noted that inwardly extending pin is disclosed, and claimed in the PCT application.

Applicant is required to cancel the new matter in the reply to this Office Action.

It is suggested that applicant change "outwardly" to "inwardly".

#### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 9-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

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one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 9 requires the pin to extend "outwardly past an inner diameter of the cover" It is noted that **inwardly** extending pin is disclosed, and claimed in the original claims.

It is suggested that applicant change "outwardly" to "inwardly".

3. Claims 11 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims lack antecedent basis for the term "recess". It is not clear how the recess relates to the indentation.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

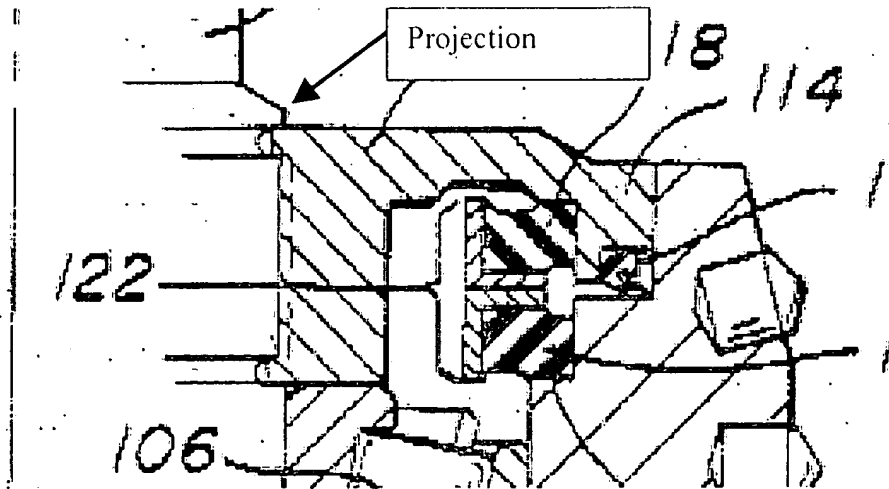
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 8 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent number 4,509,607 to Saxman, et al. (see figure 3)

Saxman describes a roller cutter comprising a hub (24) having crushing members; a shaft (100); pair of lubricant seals (122,124); and a pair of covers

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(110,112), each cover having a projection (see below) to lock the cover axially with respect to the shaft.



Saxman also describes the curved support surface (e.g. figure 3) and the shoulder as called for in claim 17.

It is noteworthy that although Saxman describes a raise boring device, Saxman uses a different roller cutter arrangement for the upwardly projecting cutters.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Saxman lacks explicit disclosure of the projection arranged to lock the cover against rotation, however the dashed line in figure 3 (shown above) appears to represent a spline or other lock against rotation. See also text at 33-35. If it is deemed that Saxman fails to disclose the lock against rotation, it would have been obvious to one of ordinary skill in the art at the time of the invention to have made it so, since Saxman plainly describes the cover bonded to the non-rotating seal.

5. Claims 9, 10, 12, 13, 14, 15, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saxman, et al. in view of Sechrist (U.S. Patent number 2,627,431) and Dolezal, et al. (U.S. Patent number 5,295,549).

Saxman lacks the pin (claims 9, and 12), v-shaped groove (claims 10 and 15), inclined surfaces (claims 13 and 18.), and the lock against rotation (claims 14 and 19)

Dolezal teaches the advantages of making a seal ring non-rotatable.

Sechrist describes a generic pin and groove arrangement for making an object non-rotatable with respect to a cylindrical body. Sechrist teaches a v shaped pin.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Saxman device to have a pin as called for in claim 9, in order to help secure the cover against rotation. (with regards to claim 12: Saxman describes the curved support surface and the shoulder---see figure 3).

With regards to claims 10, 13, 15, and 18: it is noted that none of the cited references explicitly disclose the v-shaped groove, or the inclined surfaces. Sechrist,

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however, teaches a v-shaped pin, and thus suggests to one of ordinary skill in the art a v-shaped groove and inclined surfaces. One of ordinary skill in the art would have understood the advantages of making the groove in complementary shape to the pin, e.g. to provide for a tighter fit, and less susceptibility to wear, and/or vibration.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the Saxman device to have included a v-shaped groove as called for in claims 10 and 15, and inclined surfaces as called for in claims 13 and 18.

With regards to claims 14 and 19: One of ordinary skill in the art would have understood the advantages of making the cover non-rotatable, as suggested by Sechrist. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Saxman device to have the cover non-rotatable as called for in claims 14 and 19.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Persson (U.S. Patent number 4,448,271) in view of Brolund (U.S. Patent number 5,839,523); Sechrist (U.S. Patent number 2,627,431); and Dolezal, et al. (U.S. Patent number 5,295,549).

Persson describes a raise boring cutter including a body (16) having saddles (19) projecting upwardly; a roller cutter (14). Persson lacks details of the roller cutter such as the hub, shaft, seals, and covers.

Brolund teaches a similar roller cutter device including hub ( 16); shaft (12); lubricant seals (33); and covers (32).

Brolund lacks disclosure of the covers having a projection and indentation in the shaft.

Dolezal teaches the advantages of making a seal ring non-rotatable: to reduce wear.

Sechrist describes a generic pin and groove arrangement for making an object non-rotatable with respect to a cylindrical body. The Sechrist arrangement includes a projection and indentation.

In view of the lack of structure in Persson, one of ordinary skill in the art would have found it obvious to have included the roller cutter having the hub, shaft, seals, and covers, as taught by brolund.

In view of the teaching in Dolezal that non-rotation decreases wear, it would have been obvious to one of ordinary skill in the art at the time of the invention to have made the covers non-rotatable.

In view of the teaching in Sechrist that a projection and indentation combined are effective to eliminate rotation, it would have been obvious to one of ordinary skill in the art at the time of the invention to have made the cover and shaft to have a projection and indentation as called for in claim 20.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.



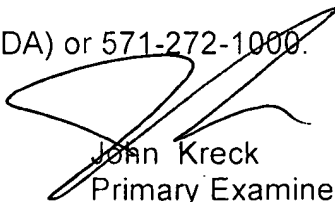
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JP'071 describes a roller cutter comprising a hub (1) having crushing members; a shaft (2); pair of lubricant seals (5); and a pair of covers (3), each cover locked axially with respect to the shaft by a screw.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kreck whose telephone number is 571-272-7042. The examiner can normally be reached on Mon-Thurs 530am-2pm; Fri: telework.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Engle can be reached on 571-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



John Kreck  
Primary Examiner  
Art Unit 3673

15 March 2007